

MRD Regulation  
No. 1110-1-12

1 April 1994

Engineering and Design  
ENGINEERING CONSIDERATIONS AND INSTRUCTIONS  
TO FIELD PERSONNEL

1. Purpose. This regulation establishes requirements for the generation and dissemination of engineering considerations and instructions to field personnel and provides a method for establishing project funding for engineering site visits during the construction phase.

2. Applicability. This regulation is applicable to all districts in the Missouri River Division, and applies to design and construction for civil works; hazardous, toxic & radioactive waste; and military programs. This includes all projects where the district is the design agent (DA) and the district, other districts, or others are the construction agent (CA).

3. References.

a. ER 1110-1-12, Quality Management.

b. ER 1110-2-112, Required Visits to Construction Sites by Design Personnel.

4. Policy. The policy of the U.S. Army Corps of Engineers, Missouri River Division, is to deliver excellent engineering and design (E&D) services and products to customers on schedule and within budget. To assist in achievement of this policy, the following will be included during the project planning and design.

a. The DA will include a section for the use of the CA entitled "Engineering Considerations and Instructions to Field Personnel" as part of the design memorandum, design report, design analysis, or other applicable basis for design. This section will be prepared for all construction projects with a current working estimate (CWE) of \$1,000,000 or greater; repair, evaluation, maintenance and rehabilitation with CWE of \$500,000 or greater; and any lesser CWE where significant design assumptions or aspects are critical to successful project completion. The availability of this section will provide construction field personnel easy access to significant design assumptions or critical phases of the project. This section shall indicate assumed field conditions and all pertinent significant (geotechnical, materials, remediation processes, etc.) aspects of the project that are included as the basis of project design. These critical aspects and design assumptions may not be evident in the construction documents. Information from the lessons learned programs should be included, as appropriate.

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b. The DA technical manager (TM) will coordinate with the CA TM during the design phase, keeping the CA aware of the contents of the section. The DA project manager (PM) will provide the CA a final copy of the above section on or before project construction Commerce Business Daily announcement, and schedule a meeting with the CA for any additional clarification required prior to project advertisement date. The section will be modified as required by agreement between the DA and the CA; minutes of the meeting will be prepared by the DA PM and signed by the DA PM, TM, and the CA TM, and disseminated to field office, Division Office, and other interested parties (sponsors, users, etc).

#### 5. Required Information.

a. Content of the section will vary according to the nature, complexity and importance of the project. As a minimum, however, the section will contain an explanation of significant design concepts including intent, assumptions and criticalness of the various features. Some of these items are not stated in the construction contract, and field knowledge of basis of design will enhance successful project completion. Field personnel will then be more able to recognize changed site conditions, invalid design assumptions, feasibility of contractor proposed work processes, and criticalness of certain features, allowing resolution of problems or conflicts at the earliest possible time.

b. The section will identify those areas requiring Government quality assurance testing (beyond normal contractor quality control testing), expected ranges for results of these tests, and recommended minimum frequencies of testing. The section will identify areas requiring special attention to contract details and/or inspection. Stages of the project where site visitation by DA design personnel is recommended will also be identified. Known sources of special materials will be indicated if they are not presented in the contract documents.

c. When the section is lengthy or significantly complex, appropriate members of the DA design personnel will meet with the CA and contractor's field personnel either at the preconstruction conference, partnering session, or later, but prior to starting work. It is strongly recommended the contractor have appropriate subcontractors present for these meetings.

#### 6. Funding.

a. Developing, coordination, and dissemination of the section will be funded by normal planning and design (P&D) funds as part of the regular design documentation process.

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b. In accordance with reference a., paragraph 6.j., the DA TM shall request the DA PM to budget funds for DA design personnel participation in site visits. These costs shall be identified as an additional line item in the CWE (not subject to supervision and administration markup), separate from E&D after award, but shown as a sub-line item to E&D after award on the CWE for Budget Purposes, ENG Form 3086. For budgetary purposes, one-half of one percent of the CWE will be included in the project programmed amount unless the DA, CA, and customer agree more or less is appropriate, dependent upon project size and complexity. This sub-line item shall be entitled "Engineering Site Visits" and fund expenditures against this account will be tracked and reported. Excess funds at project completion shall be returned to the customer or other accounts as appropriate.

7. Implementation. This regulation shall be implemented immediately for projects not beyond the 35 percent design stage by incorporation of the section "Engineering Considerations and Instructions to Field Personnel" in the design documentation. All other projects in FY 95 and later shall comply with this regulation by both the section and funding inclusion.

FOR THE COMMANDER:

/s/

KEVIN W. LEE  
LTC, IN  
Deputy Commander

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